

REMARKS/ARGUMENTS

In the Office Action of July 13, 2005 (the "Office Action"):

1. Claims 9 and 14 are rejected under 35 U.S.C. 112, 2nd paragraph.
2. Claims 1-8, 10-11, 13, 15, and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,630,812 issued to Ellman et al. ("Ellman et al."); and
3. Claims 12 and 16-19 are rejected under 35 U.S.C. §103(a), as being unpatentable over Ellman et al. in view U.S. Pat. No. 6,007,570 issued to Sharkey et al. ("Sharkey et al.").

Corrected status of the claims:

In the prior communication of June 30, 2005, "original" claims 1-19 and 48 were incorrectly indicated as being "previously presented", and "withdrawn" claims 20-47 were incorrectly indicated as being "cancelled". The correct statuses of the claims are now properly reflected in the current listing of claims herein.

1. **Rejection of Claims 9 and 14 under 35 USC 112, 2nd paragraph:**

Claims 9 and 14 are rejected under 35 U.S.C. 112, 2nd paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, it is asserted in the Office Action that the "application does not provide sufficient description of a spring member and lock-out feature." Also, it was noted that it might be argued that each of these claims describe a separate species. (Spring member versus gripping member versus threading versus latching member; disposable device parts versus indisposable device parts). Finally, it is noted that Claim 14 has no period.

Applicants respectfully submit that the “spring member” recited in Claim 9 is sufficiently described on page 16, paragraph [0061] in reference to FIGS. 9A-9C. As described therein, the end effector 138 includes an electrical connector 170 (corresponding to the “electrical connector” of Claim 9), and the distal end 131 of the instrument 128 includes an electrical transmission member 200 (corresponding to the “transmission member” of Claim 9) which is coupled with the spring member 202 (corresponding to the “spring member” of Claim 9). As shown in FIG. 9C, when the end effector 138 is coupled with the distal end 131, electrical connector 170 presses against spring member 202 to form an electrical connection between end effector 138 and distal end 131.

Thus, applicants respectfully submit that the application does provide sufficient description of a spring member as claimed in Claim 9, and respectfully request reconsideration of the rejection of Claim 9 under 35 U.S.C. 112, 2nd paragraph.

Claim 14 has been amended to claim a coupling mechanism that is “configured so as to be incapable of re-coupling to the electrosurgical instrument after once being coupled to and uncoupled from the electrosurgical instrument.” An example of such a coupling mechanism is described on pages 17-18, paragraph [0064] in reference to FIGS. 12A-12D.

Claim 14 has also been amended to include a period.

Since the term “lock-out feature” has been deleted from Claim 14, rejection of the claim under 35 U.S.C. 112, 2nd paragraph for that term is no longer applicable, and therefore,

applicants respectfully request reconsideration of the rejection of Claim 14 under 35 U.S.C. 112, 2nd paragraph.

Although it may be argued that certain of the dependent claims to Claim 1 describe different species, such an argument is only proper if they cover embodiments that are mutually exclusive of each other. For example, some of the components claimed therein are used for electrical coupling or attachment (such as a spring member) while others are used for mechanical coupling or attachment (such as complementary threading), and their usage as such are not necessarily mutually exclusive of each other. See, e.g., paragraph [0061] on page 17, where a spring member 202 is described as electrical coupling the end effector 138 and the distal end 131 of the instrument 128 and complementary threads are described as mechanical coupling the two.

2. Rejection of Claims 1-8, 10-11, 13, 15, and 48 under 35 USC 102(b):

Claims 1-8, 10-11, 13, 15, and 48 are rejected in the Office Action under 35 U.S.C. 102(b) as being anticipated by Ellman et al.

Claim 1 has been amended to include "at least one internal sealing ring disposed so as to inhibit fluid from entering into an interior of the insulative sleeve and making contact with any portion of the electrode disposed therein during a minimally invasive surgical procedure," and such a sealing ring is not taught by Ellman et al.

In Ellman et al., an electrode 74 is inserted into the bore of an electrically conductive collet 24, and an electrically-insulating nose piece 44 is rotated so that a tapered section 70 of the nose piece 44 engages a tapered front 36 of the collet 24 and forces inward jaws

72 of the collet 24, thereby holding the electrode 74 in the collet jaws 72. Ellman et al. does not disclose a sealing ring in its structure for inhibiting fluid from entering into an interior of an insulative sleeve (such as the nose piece 44) and making contact with any portion of the electrode (such as electrode 74) disposed therein.

Accordingly, Claim 1 is believed to be patentable under 35 USC 102(b) over Ellman et al. for the foregoing reasons.

Claims 2-8, 10-11, 13 and 15 are also believed to be patentable under 35 USC 102(b) over Ellman et al. since they depend from claim 1, and as such, are believed to be patentable for at least the same reasons as stated in reference to claim 1.

Claim 48 has been cancelled.

New Claim 49 has been added to claim a method for manufacturing an end effector with physical limitations such as claimed in Claim 1, and therefore, is believed to be patentable under 35 USC 102(b) over Ellman et al. for the same reasons as stated in reference to Claim 1.

New Claim 50 is also believed to be patentable under 35 USC 102(b) over Ellman et al. since it depends from Claim 49, and as such, is believed to be patentable for at least the same reasons as stated in reference to Claim 49.

3. Rejection of Claims 12 and 16-19 under 35 USC 103(a):

Claims 12 and 16-19 are rejected in the Office Action as being unpatentable under 35 U.S.C. 103(a) over Ellman et al. in light of Sharkey et al.

Claim 12 has been amended so as to indicate that at least one internal sealing ring, as claimed in Claim 1, comprises "at least one o-ring," and such an o-ring is not taught in Ellman et al. or Sharkey et al.

Sharkey et al. describes providing a sheath over the heating element, and encapsulating a guiding mandrel in silicone potting material to prevent kinking. See, Col. 18, lines 30-35. The silicone potting material is not an o-ring, however, and further, does not serve the purpose of inhibiting fluid from "making contact with any portion of the electrode" since the heating element (or electrode in this case) is already sheathed. Sharkey et al. also describes encapsulating the entire inside of a catheter with a silicone material to remove air and help support a polyimide sheath to prevent collapse of the coil. See, Col. 21, lines 37-44. Again, however, the silicone material used to encapsulate the inside of the catheter is not an o-ring.

Thus, neither Ellman et al. nor Sharkey et al. teach an o-ring as claimed in Claim 12, or even an internal sealing ring as claimed in Claim 1.

Also, the combination of the teachings of Ellman et al. and Sharkey et al., in this case, would defeat one of the purposes of Ellman et al.'s invention, which is an electrosurgical handpiece that can accept various shapes and sizes of electrodes by the simple expedient of rotating a nose piece. See, Col. 2, lines 2-5.

In particular, the combination of the teachings of Ellman et al. and Sharkey et al. effectively prevent an exchange of electrodes using the same nose piece 44, as described in Col. 4, lines 18-40 of Ellman et al., since Sharkey et al. teaches that the electrode is to be

encapsulated in the nose piece 44 with silicon material (if the silicon material is to inhibit fluid from contacting the electrode in the nose piece 44). Thus, the nose piece 44 would have to be changed each time an electrode 74 is changed by applying the teaching of Sharkey et al. to that of Ellman et al., which is contrary to a stated purpose of Ellman et al., as indicated above.

Accordingly, Claim 12 is believed to be patentable under 35 U.S.C. 103(a) over Ellman et al. in view of Sharkey et al., since neither reference teaches an o-ring as claimed in Claim 12, and further, since the combination of their teachings would defeat one of the purposes of Ellman et al.

Claims 16-19 are also believed to be patentable under 35 U.S.C. 103(a) over Ellman et al. in view of Sharkey et al., since they depend from Claim 1, and therefore, include the limitation of "at least one internal seal ring" as claimed in Claim 1, which is not taught by either reference. Further, Claim 16, as amended, claims an "insulation layer disposed partially around the electrode and one of the at least one internal sealing ring so as to additionally inhibit fluid from entering into the interior of the insulative sleeve and making contact with any portion of the electrode disposed therein during the minimally invasive surgical procedure," and such an insulation layer is not taught in Ellman et al. nor Sharkey et al.

Conclusion

Claims 1-19 and new Claims 49-50 are pending in the application. Claim 48 has been cancelled. Reconsideration of the rejected claims is respectfully requested in light of the


Conclusion:

Claims 1-7, 11-14, 17, 18, 20, 22, 27-36 and 46-48 are pending in the application.

Claims 15 and 16 have been cancelled. Applicant believe no additional fees are due however should any fees be due please consider this authorization to charge deposit account #503404 Reconsideration of the pending claims in light of the amendments and arguments set forth above is respectfully requested, and an early notice of their allowance earnestly solicited.

Respectfully submitted,

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Frank Nguyen
Registration No. 39,790
Office Phone: (408) 523-2129

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